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| WILLIAM J. SAPONE COLEMAN SUDOL SAPONE P.C. 714 COLORADO AVENUE BRIDGE PORT, CT 06605 | | | EXAMINER ORLANDO, AMBER ROSE | |
| | | | ART UNIT 1797 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/597,978

Applicant(s)

POULSEN, JORGEN

Examiner

AMBER ORLANDO

Art Unit

1797

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/07/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to the correspondence filed 01/07/2009.

Claims 1-5 and 7 have been amended.

Claim 6 has been cancelled.

Claims 1-5 and 7 have been rejected.

Claims 1-5 and 7 have been examined and are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 3, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poulsen DK 174840 in view of Kahler US 5,868,889.

4. For claim 1, the Poulsen reference discloses a method of manufacturing a filter element for use in connection with gas turbines, the filter element comprising a hollow outer insert in which a hollow inner insert is arranged centrally relative to the outer insert

(page 8 paragraph 3), said inserts comprising end edges to which a top flange is secured at one end (page 10 paragraph 2), said inserts being stiffened by a net, the method comprising applying a liquid mass to the outer and/or inner side of the filter element the liquid hardening to form the net (page 8 paragraph 3). The reference does not disclose the liquid mass being applied by the means of one or more nozzles, said nozzles being movable relative to the filter element.

5. The Kahler reference disclose the liquid mass being applied by the means of one or more nozzles, said nozzles being movable relative to the filter element (figure 2 objects 6a' and 6b').

6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Poulsen reference to include the liquid mass being applied by the means of one or more nozzles, said nozzles being movable relative to the filter element (Kahler, figure 1b objects 6a' and 6b') because this allows the user to control the amount of liquid being used, as well as control the spacing of the liquid lines.

7. For claim 3, the Poulsen reference discloses the rings formed from the liquid mass extend helically, one or more rings formed along the outer and/or inner surface of the filter element (figure 1 object 6).

8. For claim 4, the Poulsen reference discloses the liquid mass in rings along the outer and/or inner surface of the filter element (page 8 paragraph 3, figure 1 object 6). The reference does not disclose the said rings being arranged in planes essentially parallel with the end faces of the filter element, the reference does disclose the hot melt

line "can take another form" (page 9 paragraph 1). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference to include said rings being arranged in planes essentially parallel with the end faces of the filter element because it would produce the same result. The reference does not disclose using one or more nozzles to apply the liquid mass.

9. The Kahler reference discloses using one or more nozzles to apply the liquid mass (figure 2 objects 6a' and 6b').

10. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Poulsen reference to include using one or more nozzles to apply the liquid mass (Kahler, figure 2 objects 6a' and 6b') because this allows the user to control the amount of liquid being used, as well as control the spacing of the liquid lines.

11. For claim 7, the Poulsen reference discloses the filter element is made of combustible materials (page 6 paragraph 4).

12. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poulsen DK 174840 and Kahler US 5,868,889 as applied in claim 1 above and further in view of Lippold US 5,066,319 and Spencer US 5,753,071.

13. For claim 2, the Poulsen reference discloses applying the liquid mass so as to form one or more rings (page 8 paragraph 3, figure 1 object 6). Although the reference does not disclose applying and forming connecting lines between the rings, the reference does disclose the hot melt line "can take another form" (page 9 paragraph 1).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference to include the connecting lines, since it was known in the art that any shape of hot melt lines would produce the same result. The reference does not disclose one or more nozzles being stationary in the longitudinal direction relative to the filter element, while rotating filter element a number of rotations about a longitudinal axis thereof, and oscillating one or more nozzles with an oscillation greater than or equal to the distance between two rings and smaller than or equal to the length of the filter element and the rings and connecting lines forming a net.

14. The Spencer reference discloses one or more nozzles being stationary in the longitudinal direction relative to the filter element, while rotating filter element a number of rotations about a longitudinal axis thereof (column 6, lines 10-51).

15. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Poulsen reference to include one or more nozzles being stationary in the longitudinal direction relative to the filter element, while rotating filter element a number of rotations about a longitudinal axis thereof (Spencer, column 6, lines 10-51) because this allows the user to control the amount of liquid being used, as well as control the spacing of the liquid lines.

16. The Kahler reference discloses oscillating one or more nozzles (figure 2 objects 6a' and 6b'). Although the reference does not explicitly disclose the oscillations being greater than or equal to the distance between two rings and smaller than or equal to the length of the filter element, it is obvious from figure 1b objects 6a' and 6b' that the

oscillation degree can be smaller or greater depending on the users preference and have the ability to perform the above requirements.

17. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Poulsen reference to include during the application of the liquid mass, that one or more nozzles are stationary in the longitudinal direction, while the filter element rotates a number of rotations about its longitudinal axis, on which one or more nozzles rotates or oscillates with an oscillation greater than or equal to the distance between two rings and smaller than or equal to the length of the filter element (Kahler figure 1b objects 6a' and 6b') because this allows the user to control the amount of liquid being used, as well as control the spacing of the liquid lines.

18. The Lippold reference discloses the filter element and the adhesive connecting lines forming a net (column 7, lines 56-65). The reference does not explicitly state the adhesive forming rings. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference to include the adhesive forming rings since it was known in the art that any shape of adhesive lines would produce the same result

19. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Poulsen reference to include the rings and connecting lines forming a net (Lippold column 7, lines 56-65) because this makes the filter easy to handle and highly stable.

20. For claim 3, the Poulsen reference discloses the rings formed from the liquid mass extend helically, one or more rings formed along the outer and/or inner surface of the filter element (figure 1 object 6).

21. For claim 4, the Poulsen reference discloses the liquid mass in rings along the outer and/or inner surface of the filter element (page 8 paragraph 3, figure 1 object 6). The reference does not disclose the said rings being arranged in planes essentially parallel with the end faces of the filter element, the reference does disclose the hot melt line "can take another form" (page 9 paragraph 1). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference to include said rings being arranged in planes essentially parallel with the end faces of the filter element because it would produce the same result. The reference does not disclose using one or more nozzles to apply the liquid mass.

22. The Kahler reference discloses using one or more nozzles to apply the liquid mass (figure 2 objects 6a' and 6b').

23. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Poulsen reference to include using one or more nozzles to apply the liquid mass (Kahler, figure 2 objects 6a' and 6b') because this allows the user to control the amount of liquid being used, as well as control the spacing of the liquid lines.

24. Claim 5/1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Poulsen DK 174840 and Kahler US 5,868,889 as applied in claim 1 above, and further in view of Spencer US 5,753,071 and Adams et al. US 2002/0168469

25. For claim 5/1, the Poulsen and Kahler references disclose the filter element according to claim 1 as shown above. The Poulsen reference discloses applying the liquid mass in rings (page 8 paragraph 3, figure 1 object 6). The reference does not disclose using one or more nozzles to apply the liquid mass, rotating the filter element about its longitudinal axis thereof and moving the filter element to and fro in a longitudinal direction with an oscillation greater than or equal to a distance between two rings and smaller than or equal to a length of the filter element for applying connecting lines between the rings.

26. The Spencer reference discloses using one or more nozzles to first apply the liquid mass, rotating the filter element in a longitudinal axis thereof (column 6, lines 10-51).

27. It would have been obvious to one having ordinary skill to have modified the Poulsen reference to include using one or more nozzles to first apply the liquid mass, and rotating the filter element in a longitudinal axis thereof (Spencer column 6, lines 10-51) because this allows the user to control the amount of liquid being used, as well as control the spacing of the liquid lines.

28. The Adams et al. reference discloses moving the material beneath the nozzles to apply adhesive in a desired pattern (paragraph [0015]). The reference does not explicitly state the material moving to and fro in the longitudinal direction with an

oscillation greater than or equal to a distance between two rings and smaller than or equal to a length of the material for applying connecting lines between the rings. The reference discloses moving the material to produce any desired pattern. It would have been obvious to one having ordinary skill in the art to have the material moving to and fro in the longitudinal direction with an oscillation greater than or equal to a distance between two rings and smaller than or equal to a length of the material for applying connecting lines between the rings since it is well known in the art to move the material in any manner in order to create a specific design. The reference does not explicitly state the material being a filter element. It would have been obvious to one having ordinary skill in the art to have the material being a filter element since it is well known to a skilled artisan that moving ANY material beneath adhesive nozzles would produce patterns.

29. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Poulsen reference to include moving the filter element to and fro in a longitudinal direction with an oscillation greater than or equal to a distance between two rings and smaller than or equal to a length of the filter element for applying connecting lines between the rings (Adams et al.) because this creates an adhesive net (Lippold column 7, lines 56-65) that makes the filter easy to handle and highly stable.

30. Claim 5/2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Poulsen DK 174840, Kahler US 5,868,889, Lippold US 5,066,319 and Spencer US 5,753,071 as applied in claim 2 above, and further in view of Adams et al. US 2002/0168469

31. For claim 5/2, the Poulsen DK 174840, Kahler US 5,868,889, Lippold US 5,066,319 and Spencer US 5,753,071 references disclose the filter element according to claim 2 as shown above. The Poulsen reference discloses applying the liquid mass in rings (page 8 paragraph 3, figure 1 object 6). The reference does not disclose using one or more nozzles to apply the liquid mass, rotating the filter element about its longitudinal axis thereof and moving the filter element to and fro in a longitudinal direction with an oscillation greater than or equal to a distance between two rings and smaller than or equal to a length of the filter element for applying connecting lines between the rings.
32. The Spencer reference discloses using one or more nozzles to first apply the liquid mass, rotating the filter element in a longitudinal axis thereof (column 6, lines 10-51).
33. It would have been obvious to one having ordinary skill to have modified the Poulsen reference to include using one or more nozzles to first apply the liquid mass, and rotating the filter element in a longitudinal axis thereof (Spencer column 6, lines 10-51) because this allows the user to control the amount of liquid being used, as well as control the spacing of the liquid lines.
34. The Adams et al. reference discloses moving the material beneath the nozzles to apply adhesive in a desired pattern (paragraph [0015]). The reference does not explicitly state the material moving to and fro in the longitudinal direction with an oscillation greater than or equal to a distance between two rings and smaller than or equal to a length of the material for applying connecting lines between the rings. The reference discloses moving the material to produce any desired pattern. It would have

been obvious to one having ordinary skill in the art to have the material moving to and fro in the longitudinal direction with an oscillation greater than or equal to a distance between two rings and smaller than or equal to a length of the material for applying connecting lines between the rings since it is well known in the art to move the material in any manner in order to create a specific design. The reference does not explicitly state the material being a filter element. It would have been obvious to one having ordinary skill in the art to have the material being a filter element since it is well known to a skilled artisan that moving ANY material beneath adhesive nozzles would produce patterns.

35. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Poulsen reference to include moving the filter element to and fro in a longitudinal direction with an oscillation greater than or equal to a distance between two rings and smaller than or equal to a length of the filter element for applying connecting lines between the rings (Adams et al.) because this creates an adhesive net (Lippold column 7, lines 56-65) that makes the filter easy to handle and highly stable.

Response to Arguments

1. Applicant's arguments, see 5-7, filed 01/07/2009, with respect to the rejection(s) of claim(s) 1-4 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found art, Spencer US 5,753,071,

Adams et al. US 2002/0168469, Kahler US 5,868,889 and Lippold US 5,006,319 which provide for the better understanding of how and why to apply hot melt adhesives to a filter material.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMBER ORLANDO whose telephone number is (571)270-3149. The examiner can normally be reached on Mon.-Thurs. (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Walter D. Griffin/
Supervisory Patent Examiner,
Art Unit 1797